

REMARKS

Claims 1, 21 and 31 have been amended and claims 36 to 49 have been canceled.

Claims 15, 16 to 20 and 25 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The rejection is respectfully traversed.

As to claim 15, the terms alleged to have no antecedent basis are found earlier in the same claim.

With reference to claims 16 to 20, the term “calibration structure” is defined very specifically at page 19, line 1ff with reference to Fig. 4a. It follows that, since applicants can be their own lexicographers, and this be the case, there is no indefiniteness.

With reference to claim 25, the term “body” is set forth previously in the claim, the “source-drain active area” is set forth in claim 21 and the term “body” is defined in the specification as item “48” and “148”.

Accordingly, if the rejection is repeated, more specificity as to the reasoning therefore is respectfully requested.

Claims 1, 2 4 to 6, 8 to 10, 12, 26, 29, 31 to 33 and 35 were rejected under 35 U.S.C. 102(b) as being anticipated by Gaston et al. (Proc. IEEE 1995 Int. Conference on Microelectronic Test Structures, Volume 8, March 1995). The rejection is respectfully traversed.

While Gaston et al. relates in general to the extraction of parasitic capacitances, it has nothing whatsoever to do with the subject invention. Gaston et al. addresses only pure metal structures containing no devices. A parasitic capacitance of such a structure can be obtained directly by measurement alone or by simulation alone, as discussed in the

reference. The issue of accurate parasitic capacitance extraction in the presence of a device is not addressed at all in the reference.

In accordance with the present invention, important features include a method by which a parasitic capacitance of a design structure is determined by deducting a (measured, elaborately simulated, or normally simulated) test structure capacitance from a simulated design structure capacitance. An advantage is that it enables the extraction of the exact parasitic capacitance of a design structure containing a device and , hence, can significantly improve the accuracy of the parasitic capacitance extraction and subsequent circuit simulation.

Furthermore, where the feature is the gate to drain capacitance (C_{gd}), the invention enables the extraction of the exact parasitic C_{gd} of a design structure containing a device and, hence, can significantly improve the accuracy of the parasitic capacitance extraction and subsequent circuit simulation.

Still further, in accordance with the present invention, the is provided a method by which a series of parasitic C_{gd} 's as a function of S_{cg} (drain contact to gate space) and S_{cc} (drain contact to contact space) is generated based upon the feature discussed in the above paragraph and is included in the parasitic capacitance extraction flow or in the device model for use in circuit simulation. An advantage of this feature is that it enables the extraction of highly accurate parasitic C_{gd} of a design structure containing a device in a fast chip level parasitic capacitance extraction flow and, hence, can significantly improve the accuracy of the parasitic capacitance extraction and subsequent circuit simulation.

The above features, not found in Gaston et al., generally provide the advantage of enabling the extraction of the exact or highly accurate parasitic capacitance of a design structure containing a device and, hence, can significantly improve the accuracy of the parasitic capacitance extraction and subsequent simulation of a circuit which typically contains a plurality of devices.

It follows that Gaston et al. fails to teach or even remotely suggest the concept as claims in the above noted rejected claims.

Claims 3, 7, 30 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaston et al. in view of Kim et al.(IEEE Transactions on Components and Packaging Technologies, Volume 23, No. 1, March 2000). The rejection is respectfully traversed.

These claims depend from one or more of claims 1 and 21. Accordingly, the argument presented above applies to these claims as well since Kim et al. fails to overcome the deficiencies I Gaston et al. as noted above.

Claims 11 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaston et al. in view of Anholt et al.(IEEE Transactions on Microwave Theory and Techniques, Volume 39, No. 7, July 1991). The rejection is respectfully traversed.

These claims depend from one or more of claims 1 and 21. Accordingly, the argument presented above applies to these claims as well since Anholt et al. fails to overcome the deficiencies I Gaston et al. as noted above.

Claims 13, 14, 21, 23, 24, 27 and 28 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaston et al. in view of Long et al.(U.S. 6.169.302 B1). The rejection is respectfully traversed.

These claims depend from one or more of claims 1 and 21. Accordingly, the argument presented above applies to these claims as well since Long et al. fails to overcome the deficiencies I Gaston et al. as noted above.

Claims 16 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaston et al. in view of You et al.(U.S. 6,449,754 B1)). The rejection is respectfully traversed.

These claims depend from one or more of claims 1 and 21. Accordingly, the argument presented above applies to these claims as well since You et al. fails to overcome the deficiencies I Gaston et al. as noted above.

Claims 22 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gaston et al. and Long et al. in view of Anholt et al. The rejection is respectfully traversed.

These claims depend from one or more of claims 1 and 21. Accordingly, the argument presented above applies to these claims as well since Long et al. and Anholt et al. fails to overcome the deficiencies I Gaston et al. as noted above.

Further, in view of the total non-analogous nature of Gaston et al. as enumerated above, any combination of Gaston et al. with other reference, even were they, arguendo, to teach or suggest the invention, is improper since there can be no teaching or suggestion in view of this non-analogous nature of Gaston et al. to combine the references.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



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